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ABSTRACT

The purpose of this document is to explore some strategies which may be helpful to new projects during their planning and implementation years. Each chapter of the document is composed of a separate project description. Topics discussed in this paper include: 1) the adaptation of educational research to improve elementary reading comprehension: 2) the development of a community support program for students involved in a community, industrial, and school system-based career education programs: 3) the research base for precision teaching techniques: 4) the development and implementation of a program combining the resources of local elementary school teachers and the surrounding community in order to meet student needs: and, 5) indepth discussion of the attempts of a rural school to focus on the delivery and improvement of services to its exceptional child population. The authors of the document stress that none of the programs described have been subjected to formal validation. (Authors/LH)

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A CALL FOR TWELFTH CYCLE INSTITUTIONALIZATION CONCEPTS: FIVE RESPONSES

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INTRODUCTION

by Dr. Martin Ryder

The five 12th Cycle Projects contributing to this reference manual were not required to adhere to any formal criterion or rationale, prior to developing their descriptions of institutionalization elements peculiar to their projects. The personnel featured in this document are simply extrapolating one element from their respective operational matrices which seems to possess the highest probability of being institutionalized in a local school system or university.

The purpose of this document is to utilize the experiences of 12th Cycle Projects to develop a generic overview of some strategies which may be helpful to new projects during their planning and implementation years. Personnel from the 12th Cycle Projects featured will be available to the new '78 and '79 Programs to focus on possible strategies through discussion and investigations of products and processes in the various stages of institutionalization, after federal funding has been discontinued.

Each experience recorded by the 12th Cycle Projects will compose a chapter in this document. It will be the readers' responsibility to analyze each chapter and determine which elements may be of particular interest to his/her local project. The following taxonomy constructed by the Rand Corporation (1975) illustrates the concepts which should form the basic criterion for the individual readers' evaluation of the material included in this document and his/her ultimate application and synthesis:

" 1. Concrete , Teacher-Specific, and On-Going Training.

Teachers required concrete, "hands on" training in translating often very general and fuzzy project guidelines into classroom practice, and adapting project concepts to the reality of their particular situation.

2. Classroom Assistance from Project or District Staff.

Local resource and project personnel promoted mutual adaptation by offering relevant, practical advice on an "on-call" basis.

3. Observation of the Project in Other Classrooms or Districts.

... When they did visit other schools or districts (for at least a full day), their experience seemed to aid implementation, particularly for amorphous innovations ....

4. Regular Project Meetings.

Regular project meetings of project staff that focused on practical problems, not administrative or routine matters, often provided (a) a forum for the feedback necessary to adaptation, (b) an opportunity to share successes, problems, and suggestions, and (c) a vehicle for building the staff morale and cohesiveness important to effective implementation ...

5. Teacher Participation in Project Decisions.

   Teacher participation in decisions concerning project operations and modifications was strongly correlated with effective implementation and continuation.

6. Local Materials Development.

   The process of materials development promoted the clarity and commitment necessary to effective implementation and long-term continuation.

7. Principal Participation in Training.

   The active support of the principal was vital to the project's implementation and especially to its continuation ... one measure of that support was the extent to which principals participated in project training activities. Involvement of the principal in staff training provided the information the project and sustain project activities in the face of eventual staff attrition. More important, it signalled the staff that their efforts were supported and valued."*

Chapter one is based on the experiences of the Trenton New Jersey Teacher Corps Project entitled, "Adapting Research to Improve Elementary School Reading Comprehension Instruction." The adaptation consists of a taxonomy of reading comprehension which attempts to define, classify, and order comprehension ability. In addition, there is a rather extensive discussion on the planning, implementation, adaption, adoption, and institutionalization processes utilized by the Trenton Project staff.

Chapter two is a description of a Community, Industrial, and School System Based Career Education Program. The program stresses the involvement of Villanova University, Interboro School District, and the industrial complex/ community support for students in their structured attempts to explore the Philadelphia Standard Metropolitan statistical areas' economic resources relative to future career opportunities.

Chapter three discusses the research base for "Precision Teaching" and the Glassboro State College/Camden School District adaptation/adoption processes. Particular emphasis is placed on the utilization of precision teaching outcomes as a data based decision-making tool for the practicing classroom teacher. The involvement of school personnel and collaboration between Institutions of Higher Education and local school district personnel are also stressed in the discussions of planning, implementation, and institutionalization. The specific role groups of principal and teacher are discussed relative to support for implementation and product dissemination.

* Berman, Paul and Milbrey W. McLaughlin, "Federal Programs Supporting Educational Change, Vol. VIII: Implementing and Sustaining Innovations," Prepared for the U.S. Office of Education, Department of Health, Education, and Welfare, (Santa Monica, Calif. 1978), p.p. 29 - 30.

Chapter four focuses on the School District of Philadelphia s/Cheyney State College's attempts to utilize the combined resources of Lehigh Elementary Teachers and the community to service the needs of the students. The resource room concept offers an excellent opportunity for the teachers, community representatives and parents to develop meaningful input which assists their children in their successful matriculation in the educational process.

Chapter five is an indepth discussion of the attempts of a rural school district to focus on the delivery of services to its exceptional child population. Pennsylvania State University and the Keystone Central School District utilized the Teacher Corps collaborative framework to identify, analyze and design a service delivery system for children classified as exceptional. The project personnel also made rather extensive attempts to describe the qualifications of the Teacher Corps staff and the Local Educational Agency's human resource involvement. Finally, their attempts are summarized and they express a real concern about the limited planning and development time available in a two year inservice project.

The reader should be aware of the fact that this document is designed to stimulate your thinking in the possible directions in which an element possessing the capabilities for institutionalization may be designed. It by no means should be utilized as a mapping for Teacher Corps Project design. During the time this document was formulated, none of the elements included have been subjected to formal validation. Despite this fact, the Board of Directors of the Mid-Atlantic Network hope you find this information helpful.

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Joel S. Rodkin
Documentor
Mid-Atlantic Network

CHAPTER I

Adapting Research to Improve Elementary School Reading Comprehension Instruction

John K. Walthew and Sylvia S. B. d'Ambrosi

The Twelfth Cycle of Trenton State College-Trenton Public Schools Teacher Corps Project employed a research adaptation thrust. This thrust involved adapting research on the reading comprehension skills as a basis for implementing the Project's major objective of improving reading comprehension instruction a Wilson Elementary School in Trenton, New Jersey. An inservice training program was designed which emphasized a Taxonomy of Reading Comprehension developed by Thomas Barret (undated). The Taxonomy, which evolved from the work of Bloom (1956), Sanders (1966), Letton (1958), and Guszak (1966), is an attempt to define, classify, and order comprehension ability. The Taxonomy categorizes reading abilities into four areas: (1) literal meaning, (2) inferential meaning, (3) critical thinking, and (4) appreciation. Within each area specific subskills are identified. An outline of the Taxonomy is presented in Figure 1.

Planning the Inservice Training Program

Reference to the Tenth Cycle Trenton Teacher Corps Project is necessary for more complete understanding of the Twelfth Cycle inservice training goal and process. In Tenth Cycle, the Trenton Project developed an eight-module inservice training program designed to improve reading instruction at Wilson School. This inservice program provided Wilson staff members with instruction in increasing pupils' attending behavior, diagnosing and correcting word attack problems, and diagnosing and correcting comprehension problems. A brief description of the content presented in each module is included in Figure 2.

Figure 1

Outline of Barrett's Taxonomy of Reading Comprehension

1. Literal Meaning

    a. Recognition or recall of details
    b. Recognition or recall of main ideas
    c. Recognition or recall of sequence
    d. Recognition or recall of comparison
    e. Recognition or recall of cause and effect relationships
    f. Recognition or recall of character traits

2. Inferential Meaning

    a. Inferring supporting ideas
    b. Inferring main idea
    c. Inferring sequence
    d. Inferring comparisons
    e. Inferring cause and effect relationships
    f. Inferring character traits
    g. Predicting outcomes
    h. Inferring about figurative language

3. Critical Thinking

    a. Judgments os reality or fantasy
    b. Judgments of fact or opinion
    c. Judgments of adequacy of validity
    d. Judgments of appropriativeness
    e. Judgments of worth, desirability, or acceptability

4. Appreciation

    a. Emotional response to content
    b. Idenification with characters and incidents
    c. Reaction to author's use of language
    d. Imagery

Figure 2

Inservice Training Program for Diagnosing and Correcting Reading Problems

1. Module One

Identifying Pupil Bahavior

Increases teachers' skills in observing, recalling, and describing pupil behavior during reading instruction.

2. Module Two

Classifying Pupil Behavior in Reading

Improves teachers' skills in identifying pupils who are off-task during reading instruction; improves teachers' skills in determining whether on-task pupils' behavior during reading instruction is productive or unproductive.

Introduces teachers to techniques for making reading behavior more observable so that productivity - unproductivity can be more easily determined.

3. Module Three

Changing Off-Task Behavior in Reading

Introduces teachers to a variety of techniques for bringing inattentive pupils on-task during reading instruction.

4. Module Four

Diagnosing Decoding Problems in Group Settings

Offer teachers strategies for recording and classifying pupil decoding errors during group reading instruction. A technique is provided for comparing pupil decoding errors for the purpose of planning corrective lessons for group in struction.

Offers a technique for comparing pupils' decoding worksheet/workbook performances to determine weaknesses that can be corrected through group instruction.

5. Module Five

Diagnosing and Correcting Individual Decoding Problems

Offers teachers a procedure for administering a modified informal reading inventory to individual pupils requiring diagnosis of decoding problems extending beyond that able to

be accomplished during group reading instruction. Strategies for organizing and interpreting decoding information collected through the informal reading inventory are provided.

6. Module Six

Identifying Comprehension Skills

Defines and exemplifies specific reading comprehension skills in the following cognitive or affective areas: (1) literal meaning, (2) inferential meaning, (3) critical thinking, and (4) appreciation.

7. Module Seven

Diagnosing Comprehension Skill Problems in Group Settings

Provides teachers with three techniques for diagnosing pupils' reading comprehension problems during group reading instruction involving basal reading materials.

8. Module Eight

Correcting Comprehension Skill Problems

Offers teachers a comprehensive strategy for correcting diagnosed literal and inferential comprehension problems. The strategy emphasizes corrective activities at three levels of cognitive functioning: (1) concrete, (2) representational, and (3) symbolic.

Offers teachers a strategy for improving critical thinking reading comprehension skills based on the use of games; offers teachers a strategy for strengthening appreciation reading comprehension skills based on teachers' reading aloud to students.

Initially, the content of each training module was presented to the teachers as "knowledge". After accomplishing the knowledge phase of each module, participants practiced what was just learned. The inservice training included two kinds of practice: simulation and performance. Immediately after finishing a module, teachers completed simulation activities demonstrating their grasp of the information acquired. Simulated practice was followed by activities which teachers practiced in their classrooms over a two-week period. This type of practice became known in the Project as "performance". All regular classroom teachers in grades 1-6 of Wilson School took part in the inservice training.

As a result of the Tenth Cycle training experience, the Project evolved a model for inservice staff development. A schematic of this model is provided in Figure 3. As indicated in Figure 3, the instruction component of the model includes four sequenced phases: (1) knowledge acquision, (2) practice, (3) inernalization, and (4) adaptation. Only two of the phases - knowledge acquisition and practice - were employed during the Tenth Cycle inservice training.

Figure 3

TRENTON TEACHER CORPS PROJECT

MODEL FOR INSERVICE STAFF DEVELOPMENT

PRODUCT
STRATEGIES/MATERIALS

		CONTENT DETERMINATION							INSTRUCTION						
		PROBLEM IDENTIFICATION	PROBLEM VERIFICATION	SOLUTION IDENTIFICATION	SOLUTIONS/RESOURCES COMPARISON	SOLUTION DECISION	CONTENT/PROCEDURES SELECTION		KNOWLEDGE PRESENTATION	SIMULATION	PERFORMANCE	INTERNALIZATION	ADAPTATION	
CONTENT DETERMINATION	PROBLEM IDENTIFICATION	1												
	PROBLEM VERIFICATION		2											
	SOLUTION IDENTIFICATION			3										
	SOLUTIONS/RESOURCES COMPARISON				HEAD STEP 4									
	SOLUTION DECISION					5								
	CONTENT/PROCEDURES SELECTION						6							
INSTRUCTION	KNOWLEDGE ACQUISITION								X					
	PRACTICE — SIMULATION									X				
	PRACTICE — PERFORMANCE										X			
	INTERNALIZATION											X		
	ADAPTATION												X	
EVALUATION	CONTENT SELECTION PROCEDURES ASSESSMENT	X	X	X	X	X	X							
	IN-SERVICE INSTRUCTION ASSESSMENT — TEACHERS								X	X	X	X	X	
	IN-SERVICE INSTRUCTION ASSESSMENT — PUPILS										X	X	X	
	IN-SERVICE INSTRUCTION ASSESSMENT — IN-SERVICE INSTRUCTORS								X	X	X	X	X	
	IN-SERVICE INSTRUCTION ASSESSMENT — ADMINISTRATORS											X	X	

In Twelfth Cycle, the Wilson School staff decided that the inservice training modules containing content on reading comprehension were the most useful and timely for improving pupil achievement. Specifically, the Wilson teachers focused attention on the module concerned with identifying reading comprehension skills. This module included 21 skills from all four areas of Barrett's Taxonomy. These skills were selected for inclusion in the module by an Inservice Program Advisory Committee of Wilson School staff members. The Adisory Committee consisted of a teacher from each of the five units in the School, one paraprofessional, and the Reading Coordinator.

The Inservice Program Advisory Committee, in selecting the reading comprehension skills for inclusion in the Tenth Cycle training program, was generally unaware that the skills were part of Barrett's Taxonomy. The skills were identified during "brainstorming" sessions involving the Advisory Committee and Project staff members. It was only afterwards that the committee was informed of the relationship between its list of reading comprehension skills and Barrett's Taxonomy.

In Twelfth Cycle, the Inservice Program Advisory Committee decided to place special emphasis on the literal and inferential meaning skill areas. Five literal and four inferential skills were selected as follows:

1. Literal Meaning

    a. Recognition or recall of details
    b. Recognition or recall of main ideas
    c. Recognition or recall of sequence
    d. Recognition or recall of comparison
    e. Recognition or recall of cause and effect relationships

2. Inferential Meaning

    a. Inferring supporting ideas
    b. Inferring main ideas
    c. Predicting outcomes
    d. Inferring about figurative language

Implementing the Inservice Training

The plan developed by the Inservice Advisory Committee called for the Wilson staff to internalize the literal and inferential reading comprehension skills which had been selected. In choosing internalization, the Committee referred to the instruction component of the Model for Inservice Staff Development which evolved as a result of the Tenth Cycle inservice training activities. Internalization is the third phase in the instruction process which also includes knowledge acquisition, practice, and adaptation.

Four strategies for helping the Wilson staff internalize reading comprehension skills were developed and implemented during the course of Twelfth Cycle.

1. Preparation of pupil comprehension skill learning materials by the teachers and paraprofessionals.
2. Time periods for teaching the comprehension skills within regular reading instruction.
3. Teacher planned and conducted inservice workshops for using pupil comprehension skill learning materials.
4. In-class inservice assistance from College faculty during the comprehension skill instruction time blocks.

As a means of internalizing the selected literal and inferential reading comprehension skills, the Advisory Committee recommended that the Wilson staff develop pupil learning materials on a wide range of reading levels. The plan for developing pupil learning materials was presented by the Advisory Committee to the total Wilson School staff at the beginning of the 1977-78 school year for approval, which was granted.

Seven work teams were formed to develop the pupil learning materials for the literal and inferential comprehension skills. Each team comprised of Wilson teachers and paraprofessionals together with one Trenton State College faculty member. The College person nominally served as a resource for providing information about the comprehension skills and for assisting in the creation of learning activities for the skills. College faculty also acted to move the teams toward completing the agreed upon tasks. As group work progressed, certain teachers in each group emerged as facilitators for accomplishing assigned tasks.

Three primary teams developed learning materials on levels ranging from readiness to third grade; the four intermediate teams focused on reading levels from preprimer to sixth grade. The learning materials included paper-and-pencil (e.g., reading selections with questions) and non-paper-and-pencil (e.g. games) activities. The work was accomplished two afternoons a month during time when pupils were released from school. A total of twelve work sessions were held in 1977-78.

A Major purpose of the learning materials development strategy was to provide the Wilson teachers with an in-depth working knowledge of the reading comprehension skills. Early on, a number of teachers realized that the mere development of pupil learning materials was insufficient. As the inservice work progressed in 1977-78, an awareness of the need to teach the reading comprehension skills, using the materials being developed, increased. Consequently, the Inservice Program Advisory Committee devised a plan for teaching each of the literal and inferential skills in a time period which would be part of overall reading instruction at Wilson School. The designated time periods were conceived as two-week blocks in which a single reading comprehension skill is emphasized. Each block would begin and end with a test in the comprehension

skill being taught. The comprehension skill teaching blocks would alternate with two-week blocks devoted to word attack instruction. Establishing a time within reading instruction for teaching reading comprehension served to incorporate this entire instructional activity into the school curriculum.

The two-week comprehension skill teaching block was tested during the latter part of the 1977-78 school year, and problems noted. As a result of the test, a workshop was arranged for Summer 1978 to develop final plans for establishing the comprehension skill teaching blocks as part of the reading program in 1978-79. The plans were developed by the Inservice Program Advisory Committee, now augmented to include School Unit Leaders and members of the School Reading Committee. As a result of the summer workshop, the Advisory Committee assumed full responsibility for orienting the remaining teachers and paraprofessionals to using the comprehension skill teaching blocks. An orientation session for the entire School staff was followed by a series of workshops on using commercial and teacher-made materials in comprehension skill instruction. These workshops for teachers and paraprofessionals were planned by members of the Advisory Committee and conducted by them during the early part of 1978-79.

In 1978-79, each teacher at Wilson School was assigned a Trenton State faculty member to assist in providing reading comprehension skill instruction. This on-site assistance offered during the reading comprehension skill instruction time blocks, included teaching demonstration lessons, critiqueing teachers' lessons, diagnosing and correcting reading comprehension problems of individual students, and obtaining special comprehension materials needed for instruction.

Each of the four strategies for internalizing the reading comprehension skills selected from Barrett's Taxonomy has served to make the skills a more permanent part of the cognitive structures of teachers at Wilson School. Some teachers in the School participated enthusiastically in all four strategies; all teachers participated in some of the strategies.

Institutionalizing and Validating a Reading Comprehension Skills Teaching Program

Evidence of the institutionalization of the teaching of the reading comprehension skills at Wilson School is available in various forms ranging from frequently collected quantitative student data to event recording of anecdotal information. This variety of evidence concerning the teaching staff, administrators, and pupils supports the validity of an institutionalization of the reading comprehension skills program at Wilson School.

The outcomes fall into two global areas of "adoption" and "adaption". The first refers to the use of the delivery system to implement educational change through inservice actions. This includes the planning, internalization, and start up phases of the change. The second area, adaptation, refers to modifications that occur in the use of the educational change. The modifications originate from the people in the permanent system who are using the change.

Adaptation is a continuous process which occurs as a response to the needs and constraints experienced by people in the permanent system. It occurs at varying times and may take varying forms. Monitoring is needed so that the original goal is continually met. The demands and constraints of the permanent system are used as boundaries for the variety of adaptations which may occur.

Adoption: Teaching Staff

The teaching staff has demonstrated adoption of the reading comprehension skills program in several ways. Staff members participated in all major decision making, planning, and implementation activities. They selected the area of reading comprehension skills for the inservice thrust and the strategy of instructional materials development by the teaching staff as the major internalization tool. They planned the schedules and procedures for implementing the reading comprehension skills program and organized and keyed the instructional materials according to the skills. They also planned and conducted an orientation workshop to initiate the reading comprehension skills program, as well as seven inservice workshops designed to update their awareness of materials and techniques available in their school for teaching the skills.

A most important indicator of adoption is the occurrence of the teaching of the skills in the classroom. The teachers in grades 2-6 have been reporting student performance in terms of the reading comprehension skills since the program began in October 1978. The resource room records show pupil instructional materials are used. Another measure of occurrence of instruction is the weekly observation of teachers by College faculty during the skills time blocks. The observation data show that pupils are receiving lessons focusing on the reading comprehension skills.

The teaching staff continues to be involved in the decision making process. Specific plans now exist for the teachers to review their experience thus far and participate in planning how the reading comprehension skills program is to be continued in the future.

In choosing the area of reading comprehension skills for school-wide inservice the teachers have committed themselves to a common body of instructional content. This will permit them to monitor their students from year to year according to a school-wide set of skills.

The selection of the process of instructional materials development for internalization has resulted in the production of a large quantity of material. Seventy packets were developed covering all reading levels (readiness-grade 1) for all five literal skills. An additional 24 packets were completed covering some of the inferential skills. Teachers became concerned that some materials were not the designed skill or reading level. This necessitates their carefully scanning the materials prior to use.

Another measure of internalization is a two-part subjective rating of the teaching staff's knowledge of the skills covered while developing the materials. Trenton State College instructors providing the inservice training were asked to indicate the number of Wilson School staff members who fell into each of three categories of skill knowledge in October 1977, and later in May 1978.

Table 1 shows that, whereas 23 staff members could not define the skills in October 1977, there were only four remaining in this category seven months later in May 1978. Two of these four were staff members who were absent from the inservice sessions for several months.

Table 1.

Frequency of Wilson School Staff Members rated according to knowledge of Reading Comprehension skills.

Skill Knowledge Category	Time: Oct. '77	May '78
Can not define skills covered to date	23	4
Can define skills covered to date	9	19
Can develop activities on their own to teach each of the skills covered to date.	10	19

The data in Table 1 are reported and summarized in the form of frequencies only due to their subjective nature, including the use of recall over a number of months.

Adoption: Administration

One very important catalyst for the institutionalization of reading comprehension skills program was the continuous support of the principal throughout the Project. The principal demonstrated support in various ways. First, he was generally available during planning efforts and provided guidance and suggestions and clear approval of plans. He familiarized himself with the framework and goals of the Project, provided decisions based on the needs of the school and Project effort, and reinforced and monitored the teachers' efforts, since he understood their goals and was informed of their plans.

Second, he provided meeting time for his staff and permitted other schedule arrangements to facilitate adoption efforts. Another way he supported

the Project was through the candid nature in which he handled problems and a general willingness to put forth the effort to help solve them.

Adoption: Students

The third population affected by Project efforts are the students at Wilson School. Evidence of the effect of institutionalization on the pupils is available from progress records kept by the teachers. These data indicate that 398 children in grades 2-6 received instruction in the literal reading comprehension skills from October 1978 - February 1979. Table 2 indicates the number of pupils who were posttested in each skill area. Table 3 analyzes the same data to a finer degree by adding the dimension of reaaing level.

Table 2.

The number of Wilson School Pupils Posttested in Each Reading Comprehension Skill Area from October 1978 - February 1979

Literal Reading Comprehension Skill	Number of Pupils Posttested
Detail	143
Main Idea	363
Sequence	337
Comparison	253
Cause and Effect	65

Table 3.

The Number of Wilson School Pupils Posttested
in Each Reading Comprehension Skill Area by Reading Level
from October 1978 - February 1979

Reading Level	Literal Reading Comprehension Skill				
	Detail	Main Idea	Sequence	Comparison	Cause and Effect
Readiness	0	0	7	0	0
Pre primer	17	8	15	3	2
Primer	14	64	54	23	4
Grade 1	15	50	52	48	11
Grade 2	16	71	65	59	12
Grade 3	58	100	66	61	36
Grade 4	8	37	45	26	0
Grade 5	20	20	20	20	0
Grade 6	0	13	13	13	0

Performance analysis indicating the per cent of pupils passing the criterion of 80% correct on the posttests (tests of 5 items for level readiness-grade 3, and 10 items for higher reading levels) for each skill area yielded the following information: Detail, 90%; Main Idea, 69%; Sequence, 76%; Cause and Effect, 67%; and Comparison, 65%.

A less data oriented but still pupil oriented effect is the existence of a reading comprehension skills program which is consistent across grades and reading levels. Additional data on pupils are not available as yet.

Adoption: College Faculty

The last population to be discussed in the adoption area is the College faculty. Their role as "feedback professors" included a variety of duties which were described earlier. The effect of this participation on the College faculty has been to develop a cadre of professors experienced in assisting a total school in pinpointing areas for inservice training and then working with the school staff to reach inservice goals. An important element was the level of trust which developed between the College instructors and the Wilson staff.

Adaptation

Adaptation may be seen as a further step toward institutionalization. The outcomes of adaptation are more anecdotal in nature than in the adoption area. Most of them are reflected in decisions made by permanent system personnel which show change away from the "plan" implemented, and occur after the "plan".

After the pretest was administered in October 1978, it was found that first graders could comprehend material with little difficulty when it was read to them. However, they could not do so on their own at the readiness level. The teaching staff decided to concentrate on word attack skills while reinforcing comprehension as the lessons would permit.

Skill areas where materials are still lacking have been identified. These areas tend to be at the lower reading levels. This problem has resulted in the workshops planned and run by the Wilson School staff. These workshops were discussed earlier.

In January 1979, some of the teachers decided to reteach a weak skill rather than introduce a new one. This adaptation decision was based on the needs of the students. About the same time some of the teachers realized

that the reading level of the tests was generally lower than that of the teacher-developed instructional materials. Thus, the teachers started compensating by either testing at a higher level or teaching with lower level materials, depending on their students.

In February 1979, several important concerns appeared. Teachers suggested a change in the length of the teaching cycle. Some wish it to be longer, others shorter. The teachers working with young children on readiness and preprimer levels recommended one-week cycles, while those teachers working with older children indicated that two weeks was not long enough.

A majority of the teachers indicated that changes were needed in the record keeping system. A revision of this has been built into the continuation plan.

Continuation, i.e., phasing out dependency on the temporary system of Teacher Corps, also has become an adaptation issue. The first step was to identify what aspects of the reading comprehension skills program the school wished to maintain, and how it could perform the necessary functions needed to maintain the program. The Wilson School staff has been organized to make future decisions regarding the comprehension skills program.

An adaptation at the administrative level was planned. The plan calls for the principal to observe the teachers using a skills check list based on the inservice training provided by the Project. This should be an important factor in maintaining the institutionalizing of the educational change.

Another important indicator of adaptation was teachers' citing their use of the reading comprehension skills during basal reading time as well as during the skills time blocks. This use of the skills with the basal materials was the strategy which the Teacher Corps staff originally suggested for internalization, rather than the strategy of developing instructional materials chosen by the Wilson School teachers.

Conclusion

Culling through the Trenton Teacher Corps experience, five ingredients may be identified which aided the delivery of inservice education at Wilson Elementary School. First, all levels of personnel in the school were involved, some to a greater degree than others. Second, the inservice plans were designed to meet the needs as they were perceived and defined by the staff at Wilson School. There was a high level of self-determination and involvement in the development of the content and in the delivery of the inservice. This promoted a feeling of "ownership" toward the effort of establishing instruction in reading comprehension skills. Teacher Corps provided guidance and input but final decisions concerning inservice were made by the school staff.

The third ingredient was time. Time was necessary (a) to build trust among the school staff and College staff, and (b) to plan and develop the educational change. Both required release time for the school staff. The fourth item was money. Money for acquiring instructional materials selected by the Wilson staff appeared to give teachers proof that the administration was supporting their effort to improve reading comprehension skills instruction. The fifth and last ingredient was the flexibility of the permanent and temporary systems to permit adaptation while working toward the inservice goal of improving instruction in the reading comprehension skills.

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CHAPTER II

COMMUNITY-BASED CAREER EDUCATION

by

Stephen L. Organ
Community Coordinator
Interboro Teacher Corps Project

The traditional gap between studying about a job in the classroom and gaining practical experience through on-site community based explorations has been effectively bridged by the Cycle Twelve Teacher Corps funded through the Interboro School District. The project name "EXCEL" stands for Exploring Careers Through Experiential Learning.

The Interboro School District located in Delaware County, Pennsylvania, is situated just southeast of Philadelphia. The District Serves the boroughs of Glenolden, Norwood and Prospect Park and the township Of Tinicum. Encompassing an area of 5.5 square miles, the Interboro School District serves a population of approximately 29,000 people. The enrollment within the school system is approximately 4,000 students in a K-12 consolidated district.

The EXCEL program is based at the senior high school located in Prospect Park. This program is one of the few in the nation which offers this "hands-on" community-based learning experience.

While students in the traditional high school courses attend classes all day, EXCEL students devote more than 12 hours a week to specific learning projects within the greater Interboro community. The students' activities are highly organized and tailored to the individual student's needs, abilities, learning styles and their life goals. High school students in the 11th and 12th grades, ages 16 to 18, are eligible for the program.

EXCEL is a non-paid work-study program of community-based career education. Students do, however, receive grades for their efforts and the opportunity to earn 2 to 3 high school credits per year recognized by colleges and universities.

Among the major employers within the Interboro community who have agreed to participate in the EXCEL program are Westinghouse Corp., Western Electric Co., Bell Telephone of Pennsylvania, American Airlines, Taylor Hospital and the Crozer-Chester Medical Center.

About 10 to 12 hours per week of the student's time is spent observing a particular task, asking questions of the employer instructor, and becoming involved in the wok without actively providing goods or services for the employer. Imagine the feeling of a young woman at Miller's AMC agency in Glenholden as she explores the sometimes frustrating job of a busy service manager. There were people who wanted immediate appointments; there were those who wanted explanations of repairs. The young lady would have never known the pros and cons of the job if it were not for the Cycle Twelve Teacher Corps project.

"How can you find out about jobs unless you have a chance to see them in action?", asks Bob Miller, owner of Miller's AMC. "The whole idea is what else is out there? It gives them (the students) a chance to look and see what it's like to work in a factory or whatever. I think it's a darn good experience".

"It dissects the job to a very large degree", states Thomas Treacy, the Project Director, adding that the students are required to gather data and fulfill weekly project assignments such as their weekly journals that

are turned in to the individual student's Learning Manager. These journals are a non-graded exchange of ideas between the students and their Learning Managers. Students are asked to express their feelings about the program, the site they may be exploring or life in general. The Learning Manager then responds to the student (in writing). These communications are kept confidential since feelings are often present in the journal. This had increased the flow of communication between the students and their Learning Managers.

The community assignments are carefully coordinated by the Project staff which include not only Thomas Treacy as Project Director but also Beatrice Biester as the Team Leader and Stephen Organ as the Community Coordinator.

"There are programs similar to [illegible] which fail," comments Treacy. "The students are often "dumped" on cooperative employers. The employer and the student are often at a loss as to what is expected. The result is a disappointing experience for the student and employer. Our program plans an organized format for the student to follow on their own. They know what is expected of them. The employers have analyzed their jobs with respect to skills, educational requirements, etcetera, and are prepared to act as a guide to their occupations. The result is a worthwhile student exploration which does not waste the employer's valuable time."

In conjunction with the community activities, the project has contracted with the School District of Philadelphia, to use the computer services of VICS (Vocation Information Through Computer Services). From VICS the students and staff can obtain career, education and employment

information through the use of a remote high speed teletype terminal.

To better assist the EXCEL students in their explorations, the VICS system contains information on 458 occupations most common to the Philadelphia area, 350 colleges, 2,500 area employers, 700 sources of financial aid and 85 local trade, technical and business schools.

Four interns from Villanova University also work in a counseling and instructional capacity with the program. Along with their duties they are learning the roles of the Team Leader and of the Community Coordinator. For their participation in the program they receive graduate credit toward their Master's degree and their Pennsylvania State Teaching Certification.

The advantages of the Teacher Corps funding can be seen when viewed in the light of the unemployment in Delaware County, Pennsylvania, and in the Interboro School District's industrial community. The current unemployment rate computed from the Average Monthly Labor Statistics Report (Pennsylvania Bureau of Employment Security, 1978) for the county is 18.9 percent for the 16-19 year old bracket. For the 20-21 year old bracket, the rate is 15.3 percent, as compared to the national unemployment rate of 6.0 percent. (September 1978, U.S. Department of Labor, Division of Statistics). The Interboro industrial community has been plagued by the loss of several government and private contracts (Boeing-Vertol, Philadelphia Naval Yard, etcetera) and frequent industrial lay-offs (Westinghouse, Sun Ship and the Chrysler assembly plant in Newark, Delaware). Under these circumstances it can be understood why there is this negative work attitude within the community.

The Teacher Corps EXCEL program has been able to make an impact on this negative work attitude through its on-site, "hands-on" experiences. Through explorations the students are able to see things from the employer's point of view.

As with all Teacher Corps projects, the Interboro EXCEL program has a community council. The Community Advisory Council, consisting of parents, employers, senior citizens, teachers, teacher association representatives and EXCEL staff members, has aided the project staff in developing various components of the program as well as providing advice and feedback concerning goals and accomplishments of the Teacher Corps project. The Coucil is chaired by Mrs. Barbara Stamm and Mr. William Stewart. One of the major of the Community Advisory Council for the past one and one-half years was the development of life skill competencies. The Community Advisory Council has developed nine competancies which they, as community members, feel are needed to survive in today's complex society. The Life Skill competencies are as follows: (1) Listening Skills; (2) Family Living; (3) Occupational Essentials, a workbook text; (4) Insurance (auto, life and health); (5) Decision-making skills; (6) Job Applications and Job Interviewing skills; (7) Income Taxes; (8) Cardio-Pulmonary Resuscitation (CPR) ; and (9) Consumer Rights.

The Cardio-Pulmonary Resuscitation (CPR) Competency was instructed free of charge by Mrs. Karen Bates, a resident of the greater Interboro community. She not only instructed the students in the basic one-man CPR (the most common type), but also in the two-man CPR, airway obstruction, and Infant/Small Child CPR. By completing training in all of these areas,

the EXCEL students will receive the American Heart Association's Basic Rescuer's Certification. At this point in time, very few people are certified in all of these areas.

The Community Advisory Council felt that the CPR training was an extremely important technique for students to achieve to make them better functioning citizens in today's society.

One of the major thrusts of the Teacher Corps EXCEL program at Interboro High School is the explorations. The students choose an occupation from the almost one hundred sites at which to spend three to six hours over a three to five day period -- just observing (and trying) what that employer does for a living on a one-on-one- basis. After the student spends the initial three to six hours at the site and has developed a genuine interest in that occupation, they may do what is called a Learning Level at that site. A Learning Level is an extended period of time (30 - 35 hours) spent by a student at a site in order to conduct an in-depth study of that particular occupation. The Learning Levels are usually done in the Spring Semester after the student has explored five to seven different sites.

Generally, the only contact with employment that the students have had is with part-time jobs. The students look at careers casually after graduation, and many have a stereotyped picture of work. The students hear their parents talk about labor unions and apprenticeships, but during their twelve years of school they are totally divorced from the world of work. Many students, once they graduate from school, drift from job to job because the realities of the work did not meet their preconceived notions.

The EXCEL program gives students a chance to do explorations (of jobs) in an orderly, systematic manner before they enter the labor market. These explorations and basic life skills should better equip the students in planning their futures.

Preliminary information received from the second year evaluation of the EXCEL Teacher Corps Project indicates that the program has closed the gap between school and the world of work. Initial indications from the student surveys show a positive attitude about the opportunity they were given to explore different occupations and to see what career opportunities will be like in the future.

The students also felt that they increased their self-confidence and that they gained the ability to work independently.

Parents have reacted very positively to the EXCEL program. They pointed to increased maturity, responsibility and career awareness in their children.

The EXCEL students generally feel that one of the program's greatest advantages is the opportunity to explore different career options. This has resulted in increased self-confidence and the ability to work independently.

Although employment is not a goal of the program, EXCEL students have received many job offers. Often these are from the employer instructors who have seen the student's potentials first hand.

What does the future hold for EXCEL? With most government funded programs the end of outside monies can spell doom. Foreseeing this possibility the project staff with District administration has devised a plan for institution-alization. Beginning with the next school year the EXCEL exploration will become

a resource for all teachers to use as part of their curriculum. A counselor will act as the community coordinator, arranging out-of-school three-day visits for students. Some students and teachers have already piloted this variation with much success. The students like the opportunity to explore and the teachers like the added resources. The cost per pupil is low which should please all. The future of EXCEL looks bright as do the futures of the students it serves.

CHAPTER III

The Glassboro State College/Camden, New Jersey Public Schools' Twelfth Cycle Teacher Corps Project's Implementation of Precision Teaching Mathematics & Reading

by: James S. Brown, Ph. D.

The GSC/CCSS Teacher Corps Twelfth Cycle Project focused on improving student learning of the basic skills. The project was careful to document the body of research it was using (Brent, 1977), the format in which the research was adopted (Forest Hill School Handbooks I - IV, 1977), the institutionalization process (Brown, 1978), and the changes in pupil performances (Kunzelman, 1976; Loigman, 1977; Arnold, 1978; Arnold, Brent and DuRoss, 1978).

This paper is an effort to review the content product and project implementation processes.

Research Base

The Glassboro/Camden Twelfth Cycle Project is a cooperative endeavor between Glassboro State College, the Camden City Public School System and the Camden City Community. It was designed to meet certain identified Camden student needs in general and specifically those of the demonstration school. The demonstration school's needs primarily pertained to deficiencies in arithmetic and reading skills. To meet those needs the project adopted a measurement system called Precision Teaching. We first used Precision Teaching to improve the learning of arithmetic facts and reading frequency (performance) and celeration (learning). Then we expanded its use to teaching other arithmetic, reading and spelling objectives.

Precision Teaching stresses specific measurement and charting techniques. These techniques allow the classroom teacher to measure pupil learning sensitively, make decisions based on the individual student feedback and then predict the course of this learning. In addition, Precision Teaching includes suggestions on specifying behavioral objectives and empirically determining the criterion levels for objectives (Brent, 1977), Precision Teaching may be practically supplied in regular and special classrooms.

Teachers familiar with applied behavior analysis are aware that a number of different types of charts are used to display behavioral changes. However, in spite of their differences, these charts all have equally divided intervals on their vertical and horizontal scales. In contrast, Precision Teaching uses a "multiply-divide" chart on which the vertical scale intervals are divided on the basis of ratios. Multiply-divide charts are used because they display relative changes without distortions; equal percent gains get equal distance on the chart. The advantages of multiply-divide charts are explained by Koenig, 1972; Schmid, 1954; and Weld, 1972.

Another unique feature of Precision Teaching is its use of frequency of response data. Frequency of response as a datum is one of Skinner's major contributions to psychology. Precision Teaching retained this measure because it has many advantages, including its sensitivity to environmental changes, and its usefulness in dealing with the concept of probability of action -- the probability that a performance will be emitted within a specified interval (Kunzelman, 1970).

In the late 1960's, Precision Teaching encouraged teachers to use a "standard behavior chart" (Figure 1), a refinement of the many different

multiply-divide charts being used.

The chart retained the multiply-divide scale, but standardization within Precision Teaching (Lindsley, 1971) occurred. In Addition, charting conventions became standardized (Pennypacker, Koenig, and Lindsley, 1972).

Precision Teaching monitors weekly learning or "celeration" (the change in the frequency of a performance over a one week period). It is unique in that it not only measures performance, but also learning. Daily student performance is charted on the standard behavior chart and evaluated. Teaching changes are made according to the trends indicated by the charted data. These data-based decisions are the products of Precision Teaching.

The first requirement of Precision Teaching is that an academic or social performance be behaviorally defined. The process of specifying objectives is called "pinpointing" and the objectives pinpointed are functional "movement cycles". An objective that is defined as a movement cycle will be countable, show action, and be repeatable. For example, the writing of digits is a movement cycle which is the source of an objective that may be stated as: "to accelerate writing digits from 10/minute to 100/minute by March 10, 1976." Talking out is a movement cycle which is the source of an objective that may be stated as: "to decelerate talking out from 2/minute to 0/minute by September 15, 1978."

Movement cycles are measured in terms of their <u>frequency</u> (occurrence) per minute. Frequency is used for many reasons. One reason is that frequency is something all performances have in common and therefore can

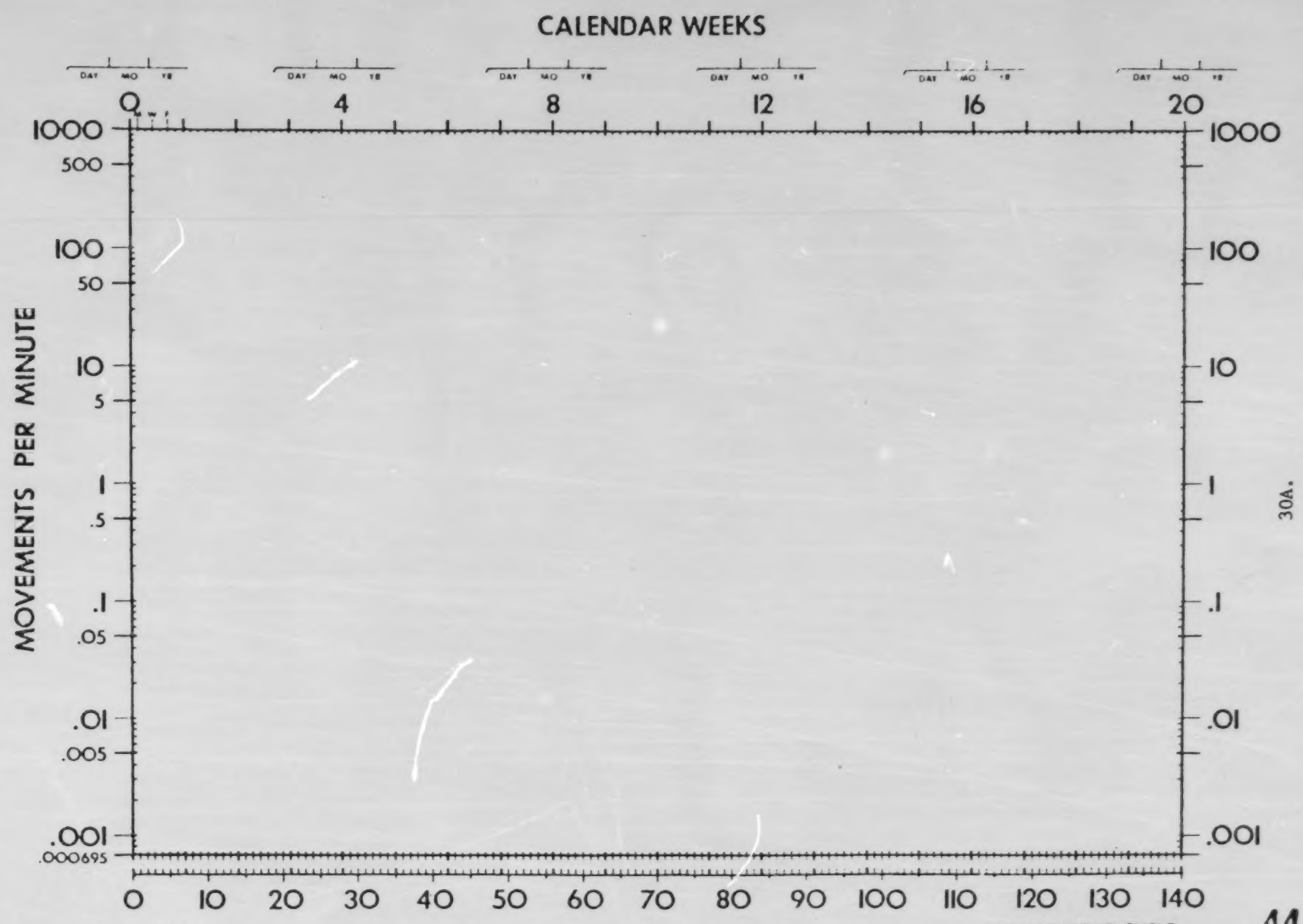

Figure 1.

30A.

43

44

PROJECT TEAM

SUPERVISOR _____ BEHAVER _____

ADVISOR _____ AGE ___ LABEL _____ MANAGER _____

COUNTER _____ CHARTER _____ NOTES _____

MOVEMENT CYCLE

NAME IT _____

COUNT WHEN _____

_____ OCCURS

be used as a universal measure. A second is that frequency is sensitive to changes in the environment. A third is that when frequency is charted properly, both speed (frequency) and accuracy (percent) are retained. Fourth, and perhaps most important, is that when frequencies are plotted on a standard chart, they may be summarized with a straight line. This line may be extended to the right in order to project future learning.

Since Precision Teaching uses the standard chart and similar charting conventions, communication is increased between educators. Most important, however, are the features of the standard chart that allow accurate data analysis in terms of both frequency (performance) and celeration (learning). By drawing a straight line through the middle of the daily frequencies charted, the data can be summarized and restated in terms of learning characteristics. The direction of this line shows whether the frequency of performance is accelerating, decelerating or remaining the same (Lindsley, 1971).

Celeration refers to the direction of the line. Acceleration (/) refers to performances multiplying, and deceleration (\) to performance dividing. As an example, a learner's performance on addition facts (sums to 18) on Monday is 10 correct/minute and a week later, on Monday, the performance is 20 correct/minute. The celeration is described as a times 2 change: 2 times 10/minute is 20/minute. The frequency was multiplied by 2. It increased 100%. Celerations may be measured over many weeks but a period of one week is used as a standard measure to compare changes.

The celeration or learning path is extremely important to the teacher. It provides convenient information for decision-making. The teacher knows

a learner's starting performance level, current performance status, and projected learning outcome.

Project Choice of Precision Teaching

Precision Teaching was chosen for the 12th Cycle Project because of the college's experiences during the Glassboro/Camden 10th Cycle Project. The most useful part of the 10th Cycle was our application of behavioral principles to improve teaching procedures. For the 12th Cycle, we wanted to delve further into the use of behavioral principles and to apply them more systematically to the teaching of basic skills. With this end, we chose Precision Teaching. It has proved a beneficial choice since it allowed the program implementers to focus on the academic needs that were identified as priorities. Even more importantly, its use resulted in substantial, measureable learning of basic arithmetic, spelling and reading skills.

Research Adaptation Process

Teaching arithmetic facts was the first concern of the project. The adaptation process described below will confine itself to arithmetic examples. Similar large scale efforts were also made with spelling and reading objectives but the efforts were similar to the arithmetic and therefore will not be described in this paper.

Precision Teaching is a measurement system. Although it theoretically can be used in traditional classroom situations without changing the existing

teaching procedures, we felt that we could do better if we had procedures and materials that lent themselves to a counts-per-minute measurement system. Therefore, in addition to the problem of how to use a new measurement system, the project was faced with developing new teaching procedures and materials.

The materials problem was first met by asking consultants for assistance in finding examples that could be copied. No materials were found that met our specifications. (Several months later materials were located that could have been used.) The project then secured the city's math curriculum objectives and used these as a basis for developing the needed materials. Practice sheets for the basic objectives were produced in a format that was compatible with the measurement system being used (Figure 2). The practice sheets were arranged in a logical sequence (Figure 3).

Since Precision Teaching is a system to measure individualized learning, the project chose to use the following organizational format. For arithmetic facts, a daily ten minute period was used for practice and testing. Each student practiced on worksheets that pertained to his particular objective. The same worksheets were used daily for one-minute timings (tests).

The development of the practice period format, teaching procedures, and worksheets required a major expenditure of time and effort during the project's first year. The initial ideas were field-tested in classrooms during the first months of the project with a few students. When workable ideas emerged, they were shared with all the Teachers in the demonstration school and tested in many classrooms.

S-3-f
S-4-f

A-B Arithmetic Practice Sheet

STUDENT _____ TEACHER _____ DATE _____

Corrects (per minute): _____ Improves (per minute): _____ Adm _____

14 -5	10 -5	13 -5	9 -5	7 -5	5 -5	11 -5	4 -5	8 -5	13 -5
13 -5	9 -5	8 -5	5 -5	7 -5	8 -5	5 -5	13 -5	15 -5	14 -5
14 -5	10 -5	8 -5	7 -5	13 -5	8 -5	11 -5	7 -5	5 -5	12 -5
13 -5	12 -5	11 -5	9 -5	10 -5	8 -5	5 -5	7 -5	13 -5	12 -5
5 -5	7 -5	9 -5	10 -5	12 -5	14 -5	8 -5	9 -5	13 -5	12 -5
9 -5	7 -5	5 -5	14 -5	12 -5	12 -5	13 -5	8 -5	6 -5	12 -5

Figure 2.

34.

Division

D - 1 See-Write (random): Complete division sentences in the form a + __ = c or __ + b = c.

D - 2 See-Write (random): Divide numbers in the form $a\overline{)b}$ or $a\overline{)bc}$.

example: $3\overline{)9}$ or $9\overline{)81}$

D - 2 - a: Divide by 1's.

example: $1\overline{)2}$

D - 2 - b: Divide by 2's.

example: $2\overline{)2}$

D - 2 - c: Divide by 3's.

example: $3\overline{)9}$

D - 2 - d: Divide by 4's.

example: $4\overline{)32}$

D - 2 -e: Divide by 5's.

example: $5\overline{)40}$

D - 2 - f: Divide by 6's.

example: $6\overline{)54}$

D - 2 - g: Dvidie by 7's.

example: $7\overline{)28}$

These ideas grew steadily as did the number of children in each room involved in Precision Teaching. By January, 1976, all the students were included.

Delivery Systems

The general goal of the inservice plan was to involve teachers immediately in implementing the new techniques and to keep them involved during and after the two-year project. That is, we wanted the teachers to incorporate the procedures into their normal repertoires. A description of the plan is offered below.

Phase I: Implementation

Teacher Corps guidelines suggested that training for experienced teachers be field-based. The Glassboro/Camden Project had to specifically define this concept to fit the needs of the research adaptation program. We felt that the college instructors had to be readily available to the teachers and that the college instructors would profit by seeing how Precision Teaching was actually working in the classroom. Therefore, we decided for the following:

- instruction would be given on site
- college instructors would be available in the school during the entire day and follow the public school calendar
- in-class assistance would be provided to the classroom teachers

Minimally, one formal training session concerning Precision Teaching was scheduled weekly. Sessions included both theory and practice. At the beginning

they were heavily dominated by the college instructor. Eventually, the teachers started to become more actively involved in the sessions since the data from their applications and their suggestions for teaching formats became the focus of the sessions.

The sessions became teacher-led discussion concerning the student's daily performance on arithmetic objectives. Teachers displayed student data on transparencies of Precision Teaching charts. Discussion concerning student learning followed. Teachers also suggested and/or demonstrated new teaching and classroom management procedures.

The project was fortunate since training time was adjusted as needs indicated. Weekly sessions were often supplemented with small work-group meetings where teachers from the same grade level shared common problems and suggested new ideas. At one point, several days of inservice were obtained from the school system.

Supportive Services and Administrative Leadership

The Teacher Corps Project was designed to affect significantly the instructional process in the demonstration school. To make certain that the realities of the school were known to the college staff and that teachers correctly adapted the new strategies, the college personnel became actively involved in the schools. Both professor, Teacher Corps Project staff, and teachers worked cooperatively toward achieving the project's academic goals for the children. In-class support by college, Teacher Corps Project staff and school personnel was considered extremely important to the success of

this project. The best teaching procedures will not work unless they are applied constantly. Cogan (1973) emphasizes the importance of in-class help. He attributes much of the failure to successfully adapting new programs to a lack of "....continuing in-class support".

Support from the Teacher Corps staff included everything from giving a lecture on the theoretical aspects of the research to securing and assembling the shelves needed to hold the practice sheets for the Precision Teaching materials. Support in any form was available to teachers immediately if resources were on hand and within a few days if they had to be created. purchased, borrowed, etc.

Fortunately for the Teacher Corps staff the principal of the 10th Cycle Demonstration School was instructional leader as well as an outstanding administrator. The principal quickly mastered the research being adapted and became an integral part of the Teacher Corps implementation team. The active cooperation of the principal resulted in the new teaching strategies becoming part of the schools' normal repertoire rather than an "extra" dependent on the longevity of external funding. The principal offered instruction curriculum and administrative leadership by:

- attending each project training session with the teachers
- trying techniques with children and making suggestions based on these field-tests
- handling Teacher Corps Project administrative chores occurring with in the demonstration school..

- encouraging the teachers to participate in discussions by citing their achievements or asking the Teacher Corps staff to involve teachers in demonstrations during the training sessions.

Since the teachers, principal, Teacher Corps staff and college staff were learning how to adapt the research together, an atmosphere of support was created.

As an administrator, the principal was also able to help the project by:

- securing rooms for meetings
- arranging storage space for several hundred thousand worksheets
- locating or purchasing needed supplies
- arranging teacher schedules to permit released time
- involving all teachers in giving classroom demonstrations for visitors
- requiring Precision Teaching to be included in weekly lesson plans as a regular part of the daily program

Phase III: Dissemination

We produced video-tapes, slide presentations, handbooks and worksheets. We also published articles and gave numerous presentations and demonstrations. These acitivities were mainly thought of as ways of involving teachers in the research adaptation activities.

A plan for dissemination had been included in the original proposal. This plan was considered an integral part of the inservice program. It was reasoned that teachers who became involved in demonstrating the research adaptation in their classrooms and helping other teachers adopt the procedures would be committed to institionalizing the research.

The dissemination approach was called the Consulting Teacher model (McKenzie, 1970). In the consulting Teacher model, teachers in the graduate program were released each week for approximately one day in order to consult with other teachers in the system on classroom problems. The Consulting Teacher was replaced with a substitute teacher during this time period. A regular staff or a trained permanent substitute was used so that the classrooms of the "consulting" teachers were not academically harmed. Unfortunately, Teacher Corps was unable to fund this portion of the proposal. Local Education Agency funds were ablt to be used to finance the Consulting Teacher plan. Several presentations were given by the Teacher Corps staff and the demonstration school teachers and pupils. The presentations were attended by several hundred New Jersey teachers and administrators. Interested educators were invited to the demonstration and inservice. Handbooks and sample sheets were provided for visitors who wanted to adopt the procedures in their classrooms.

Outcome

During the two projects, several schools outside of Camden adopted our techniques. In Camden itself, a combination of widespread interest in Precision Teaching and data indicating that students in the demonstration

schools significantly improved their arithmetic skills led to a system-wide effort to adopt Precision Teaching procedures.

Planning for the institutionalization of the Precision Teaching Process theoretically began in the objective phase. The practical institutionalization process began June, 1978 with additional dollar support from the Mid-Atlantic Network and the New Jersey State Education Agency. Resources also included a large group of teachers, trained in the 10th Cycle Project, who were both experienced with using Precision Teaching and in training other teachers to use the procedures. In addition, the resources of the Local Education Agency's Office of Staff Development were available. The 12th Cycle Project staff provided the most help by organizing and conducting the training and implementation aspects.

One hundred Camden teachers attended a June, 1978 workshop. They started to adopt Precision Teaching arithmetic the following September but a teachers' job action caused a delay.

Precision Teaching reading techniques are now being adopted throughout the Camden School District. This effort is the result of pilot work started during the 10th Cycle Project and continued under 12th Cycle Project and a New Jersey State Department of Education Agency Project. At first the state funded a project to document and expand the pilot efforts.

In July, 1978, the state conducted an on-site eveluation of the project. They were so impressed with the work that had been completed that they encouraged the demonstration school and the Teacher Corps project to seek a continuation grant. The fourth grant was acquired and is now being implemented along with the 12th Cycle Project (1978 - 1979).

The continuation state grant was funded for two purposes: the expansion of Precision Teaching to reading comprehension, and the dissemination of the Precision Teaching procedures to teachers involved with State Compensatory Education. At present 200 teachers have been trained by the demonstration schools and the Teacher Corps Projects' staff and are implementing the procedures in their classrooms. Data will be analyzed in June, 1979 to determine if students in the experimental groups learned more reading than the students in the control group.

In addition to the above, the Camden City Public Schools' Office of Staff Development is offering several Precision Teaching Mini Courses during 1978 - 1979. The courses, Precision Teaching Arithmetic and Precision Teaching Reading are taught by teachers who received their training in the demonstration school. About 15 teachers are enrolled in each course.

The bottom line intent of every teacher Corps Project is to increase student learning and then to institutionalize the strategy responsible for the increase. This project has accomplished both endeavors.

Several external evaluations indicate that students exposed to the projects's Precision Teaching increased their learning. One study shows an average student grade gain in math of 1.37 years, while the students in the control group has an average student grade gain in math of 1.05 years. The experimental groups' error rate in another study was 24.75%, and the control groups' error rate was 45.51%. Students in one study's experimental group had a weekly average grade gain of 18%, while the control group's weekly average grade was 10%. Even though the students exposed to Precision Teaching Reading technique will not produce a summative evaluative data until after June 30, 1979;

however, the embedded evaluation milestones indicate that the inservice will be successful. The milestones that predict success are:

- twenty-seven Master thesis with statistical data are showing students learning and project process success
- a $20,225.00 grant was awarded from the State to develop a Precision Teaching Manual
- tentative student test data is encouraging
- a positive community attitude has replaced a very negative community attitude
- a recent building staff survey gives our Teacher Corps Project very high marks
- U.S.I.E., S.E.A. and L.E.A. evaluations indicate that our project has been successful.

Process Documentation

Process documentation began with the proposal writing stage of the project (Brown, 1978). The institutionalization aspect began with the diagnosing of the clientele's real, not perceived, needs. The real needs are imperative because the project goals and objective statements are written directly from the needs statements.

Space prevents a comprehensive exploration of the process, howeverm the following is a step by step outline model of the Simplified Systematic Planning and Implementation Process.

A. Research Phase

1. Record all negative indicators realized from observation, rumor, the media, meeting minutes, etc. , such as:

   a. students cannot read

   b. students cannot compute numbers

   c. too many major student discipline problems

   d. parents do not attend school board meetings, P.T.A., Teacher Corps, Title I, etc.

   e. teachers are not teaching students correctly, nor is the material or curriculum relevant

   f. the community is not able to interact effectively with the educational professionals

2. Validate or invalidate all negative indicators by analyzing and/or reviewing the following documentation via:

   a. existing data

      1. meeting minutes

      2. reports

      3. test scores

      4. evaluations

      5. media results

      6. others

   b. "now" data

      1. surveys

      2. observations

      3. in-depth interviews

4. trend extrapolations

5. cross impact matrices

6. sensor indicators

7. the negative indicators mentioned above that became real needs as a result of being validated, via existent and now data is expressed in the following needs statements:

   a) 43% of the students were not meeting the minimum state requirements in math or reading

   b) student absenteeism averaged 20% per day

   c) student tardiness averaged 35% per day

   d) teacher absenteeism averaged 10% per day

   e) a myriad of management problems of long standing lead to a high level of staff ennui and teacher fatigue

   f) the incidence of disruptive behaviors on the schools suggested a whole continuum of inadequate responses on the part of both the administrative and classroom teaching staffs

   g) the traditional out-migration of the majority, leaving the minority

   h) leaders were unresponsive to the school district's new "majority"

8. by using the above mentioned needs statements, the following objective statements were formulated to address the classroom teacher's needs:

   a) to develop diagnosing procedures

b) to establish individual student objectives

c) to sequence instructional materials and activities appropriate to student objectives

d) to utilize instructional materials and activities appropriate to student objectives

e) to measure real student growth

f) to evaluate teacher inservice training models

g) to interpret individualized learning patterns

9. the above objective statements were developed into the following behavioral objectives:

a) the number of students not meeting the state minimum will be reduced by 50% in the two-year period

b) the 35% average student tardiness rate will be 17.5% by the end of the project

c) the student absentee rate will be reduced by 50% by the end of the project

d) the teacher turn over rate will be decreased to less than 10% yearly by the end of this two-year project

e) students being disciplined for major offenses will be reduced by 50% by the end of the two year period

f) parents will work in the classroom side by side with the professionals

B. Field Testing

1. A tripartite management approach was devised

a. L.E.A. Co-Director

1. responsible for all activity occurring in the local district above the demonstration school building level through the central administration level and the policy making group, the Board of Education
2. support the other two administrators in their areas of responsibility

b. Demonstration School Principal

1. responsible for all activity occurring within the confines of the demonstration school building
2. support the other two administrators in their areas of responsibility

c. I.H.E. Co-Director

1. responsible for all activity occurring at the college
2. supportive of the other two administrators in their areas of responsibility

2. Implementation of the Simplified Systematic Planning and Implementation Process (S.S.P.I.P.)

a. Time Sequence Graphics

b. Functional Responsibility Chart

c. Personnel Matrix

d. Functional Organizational Chart

e. Work Breakdown Structure

f. Manning (Personning) Schedule

g. Discrepancy Analysis Model

h. Individual, Group and Program Planning Scheme

3. Inservicing training of the L.E.A. Personnel, Community persons, the I.H.E. Personnel and other external agencies.
4. All inservice needs, other than those being addressed by the I.H.E., were addressed via the Request for Proposal and Request for Bid instruments.

C. District Validation Phase

1. Twenty on-site demonstration were carried out for the district and college decision-makers between December, 1975 and January, 1979.
2. Three major presentations, that included statistical proof of the Precision Teaching strategies' success, were made before the superintendent and his assistants.
3. Ten written reports or formal memos discussing the worth of the Precision Teaching strategy in math and reading were sent to the "powers to be".

D. Dog and Pony Show Phase

1. Fifty demonstrations for prospective "trench" implementors were carried out throughout the district, the state and the country.
2. Four regional demonstrations for educational administrator in the Educational Improvement Centers.
3. Five demonstrations for national audiences in Washington, D.C.; St. Louis, Missouri; Atlantic City, New Jersey; Miami Beach, Florida, and Kansas City, Missouri.
4. Twenty journal articles
5. Twenty-five demonstrations at local district sites.

E. Turn Key Phase

1. A team of trainers from Forest Hill School consisting of someone from each grade level, the principal and a L.E.A. Coordinator, are available to respond to on-site problems.
2. The local district's reproduction unit is making Precision Teaching sheets available to those schools implementing Precision Teaching.
3. The overall management of the process has been interfaced with the L.E.A. via the district's training arm, the Office of Staff Development.
4. The L.E.A. allows a "trouble shooting" team to be available to classroom teachers from 8:30 a.m. to 8:45 a.m. and 3:30 p.m. to 4:00 p.m.
5. Vis-a-vis the L.E.A. Precision Teaching Workshop participants are receiving in-house credits which can lead to salary increases.
6. The L.E.A. Sponsored four Precision Teaching Mini Courses again in-house credit is being given and the instructors fees are being paid by the L.E.A.
7. The L.E.A. awarded Mini Grants to encourage Precision Teaching activities.

The Precision Teaching Implementation and maintenance cost are the following:

- three day workshops with consultant fees at a cost of $100 for every twenty participants
- workshop one will be for both the math and reading group at a cost of twenty teachers salaries (20 teachers at an average of $83 per day equals $1,660 or $4,980 for the three days)

- workshop two will be attended only by either the math or reading group
- workshop three will be attended only by either the math or reading group - it does not matter which is first but we do not recommend that the average teacher attempt to implement reading and mathematics simultaneously
- the maintenance cost consists only of materials, approximately one per cent per student per day, or a $1.80 per year, and at least five days of consultant cost of $500

There are several cost items that could be added for timers, file cabinets, shelves, file folders, five person hours per week and two follow-up workshops but you can substitute existing items for these things.

After taking all of the above into consideration the cost factor is only $9.34 per student for year one, each subsequent year or during maintenance the cost would only be the cost of P.T. sheets $1.80 per year.

Conclusion

Our experience suggests that the following are of paramount importance in running a successful project:

- identify real needs, not perceived needs
- implement the needs addressing strategy via a systematic approach
- supply needed resources both human and physical
- acquire the cooperation of the key building administrator
- have instructors readily available to the classroom teachers on-site and in their classrooms on a daily basis
- utilize feedback from pupils and teachers to adopt or modify the needs addressing strategy
- involve teachers with the dissemination and institutionalization of the needs addressing strategy
- remember that initial success depends upon teachers using the procedures correctly with their students and long term success depends upon making sure that their strategy can be maintained economically, politically and philosophically.

A Sampling of the

Chronological List of Events

10th Cycle Teacher Corps - Forest Hill Elementary School

June 1, 1975	10th Cycle Project starts
June-August, 1975	Consultants work with G.S.C. instructors
August, 1975	One week teacher inservice - overview of Precision Teaching
September, 1975	Inservice begins at Forest Hill . Primary and intermediate team leaders are selected . Forest Hill parents receive lecture on Precision Teaching
October, 1975	Teachers begin to implement Precision Teaching of math in classrooms with three children
December, 1975	Teachers implement Precision Teaching of math with their entire class
May, 1976	. Expansion of Precision Teaching to spelling
July-August, 1976	Development of Precision Teaching handbooks
August, 1976	Precision Teaching presentation at National Teacher Corps Conference
October, 1976	Expansion of Precision Teaching to reading Teacher Corps presentation at Glassboro State College to regional teachers and administrators Collaboration on dissemination begins with the N.J. Central Education Improvement Center
November, 1976 - May, 1977	Teacher Corps presentations throughout school district Initial reading results reported at the International Reading Association Convention
June, 1977	10th Cycle ends

A Sampling of the

Chronological List of Events

12th Cycle Teacher Corps - Cramer Elementary School

July 1, 1977	12th Cycle Project Starts
August, 1977	One week teacher inservice on Precision Teaching Implementation
September, 1977	Inservice begins at Cramer School
	Cramer School Parents participate in Precision Teaching Awareness Workshop
	Community Building Workshop
October, 1977	Orientation Resource Center Workshop
	Non-Discriminatory Testing Workshop
November, 1977	P.T. Classroom Utilization procedures workshop
December, 1977	Learning Centers presentations
January, 1978	Community Building Workshop
	P.T.W. Follow-up Workshop
February, 1978	Precision Teaching Math Mini Course
March, 1978	P.T. presentation for the S.E.A.
April, 1978	P.T. presentation for Edgewater Park, N.J.
May, 1978	P.T. Strategy Implementation up-date sessions
	Cramer School Student Incentive Day
June, 1978	P.T district implementation workshop (100 district teachers attended 3 consecutive implementation workshops)
July, 1978	Remedial Reading Program (for needy demonstration school students)

August, 1978	Parenting Inservice
September, 1978	P.T. Math Follow-up workshop
October, 1978	Campus experience for interns(interns and community coordinator reported to the G.S.C.)
November, 1978	P.T. Math district implementation
December, 1978	Discipline workshop
January, 1979	Three implementation P.T. Reading workshops
	P.T. Reading and Math Mini Courses 20
February, 1979	Corrective Reading Workshop (Direct Instruction-Distar)
March, 1979	Corrective Reading Workshop

A Sampling of the

Chronological List of Events

State Compensatory Education Grant

(100 teachers are implementing Precision Teaching Reading Technique)

April-August, 1978	State Grant begins: Proficiency Levels in Oral Reading
April-June, 1978	Presentation of Precision Teaching Reading and Math to interested schools throughout the district
June, 1978	Three day district workshop inservice training to implement Precision Teaching Math
September, 1978	State funded project dissemination of Precision Teaching in Camden City begins
November, 1978	Precision Teaching reading presentation at New Jersey State Teacher's Convention
December, 1978 - January, 1979	District Workshops implement Precision Teaching Reading district wide

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CHAPTER IV

INSTITUTIONALIZING THE TEACHER CORPS RESOURCE ROOM

BY

ANDREA TAYLOR FURLOUGH

A basic assumption of the 12th Cycle Teacher Corps Project (School District of Philadelphia/Cheyney State College) is the notion that each person has a particular thinking style and this style affects the way he or she perceives the world and deals with information. If we, as parents and teachers, know and understand our own thinking style and its characteristics, we will be better able to understand the variability in the children we work with and can, therefore, design material appropriate to their individual needs. (Mok, Byram and Simon).

The Resource Room at the Lehigh Elementary School, therefore, is a primary site for the programs of the 12th Cycle Project and it serves as a focal point for activities that support these ideas as well as the strong school-community relationship emphasized by all Teacher Corps projects. Many of the project activities occur in this room and some that were begun here have now extended throughout the school and community. During the first year of the 12th Cycle Project, the Resource Room was developed, operated, and maintained entirely by the Teacher Corps staff for the benefit of the Lehigh Elementary School faculty and community members, and was used as: (1) a source of curriculum ideas and materials, (2) as a site for curriculum workshops, general interest workshops, and Child Study Group Workshops, and (3) as a meeting space for groups such as the Teacher Corps-Lehigh Community Council.

The Teacher Corps-Lehigh School Resource Room was originally two small rooms in the school. The adjoining wall was removed and the staff began the arduous task of transforming it into something that would be a stimulating environment, rich in ideas and materials, and became a focal point for the 12th Cycle Project. The Resource Room concept at Lehigh is based on an idea that originally came from England where Teacher Centers are crucial in stimulating and supporting imaginative and individualized instruction. In this country, and this is certainly true in Philadelphia, the concept has been extended to include parents who want to work with their children at home. The Community Education Center, sponsored jointly by the School District of Philadelphia and the local community, and the site of many 10th Cycle Teacher Corps activities, is a Center that provides programs of special interest to both parents and teachers jointly, as well as programs for each group separately. Thus, in developing the Resource Room, the Teacher Corps staff was anxious to pursue this school-community concept in this particular school setting.

The Room is stocked with what we call "raw" materials. That is, basic supplies that can be turned into other products because one of our goals is to help parents and teachers understand that they can provide creative and skill-oriented materials for their children without spending a lot of money. We, therefore, bought no ready-made kits that would require additional money to resupply at a later time, but stocked our shelves with books and catalogues that could generate ideas and supplied the materials to make games or implement a project in a classroom. Our purchases included office supplies, usually available to school faculties; art supplies that could be bought or sometimes "scrounged" such as posterboard, crayons, yarn, clay, wheat paste and construction paper; recycled material, that is paper scraps from a printer, discs and tiles

from the Kennedy Center, a distribution center for surplus materials, discontinued wallpaper sample books from a "Wall Center" store. Major purchases were shop materials and supplies, and laminating film and seal release paper. Costs was kept down by using tri-wall, a triple thickness cardboard, as a building material instead of lumber. Tri-wall can be used to construct tables, chairs, study carrels, cubbies and bookcases; is durable and can be easily manipulated even by those not experienced with power tools. A saber saw, electric drill and some simple hand tools were purchased for use in tri-wall construction. The laminating film, intended for use on a dry mount press, is used with a very hot iron to laminate and protect hand-made games.

After stocking the Room with materials, the next step was to develop curriculum that could be easily used by teachers, would help draw them into the Resource Room, and get them involved in a change process that would help them meet the individual needs of their students. Our initial efforts featured math and language arts skill-building games that could be made from posterboard and odd scraps, and would fit into a shoe box or a large manila envelope; a poetry project based on books available in the Resource Room that was appropriate for all ages and reading levels; hand-bound books that could be made from scrap material and their use for language arts projects; and a display including directions for activities on the use of the Balance Beam, a device readily available in this school but used by very few because of lack of experience. The staff has continued to use this display area to feature supplies that many teachers have but may need help in using in their rooms.

In addition to the curriculum ideas, the Teacher Corps staff sponsored a series of workshops at lunchtime and after school on topics oriented toward

developing cognitive skills. Some examples are: math and language arts games, using unfamiliar materials such as cuisenaire rods, pattern blocks or balance beams, and introducing new classroom projects such as sprouting seeds or graphing techniques. Workshops, such as a series on individual thinking styles, were arranged, partly based on the teachers' requests for content that would be interesting for their personal development. Craft-oriented workshops were given for the same reason - to provide teachers an opportunity to develop their own skills and interests whether or not they pertained to the classroom.

Another important part of the 12th Cycle Project was the in-classroom support given to the faculty. The Teacher Corps staff used the Resource Room as a home base in the school to prepare lessons and materials to take into classrooms, and for conferences with the Lehigh staff members about their classroom work. Thus, the Teacher Corps Resource Room was used by Lehigh faculty as a conference and meeting room, a source of ideas and materials, and a site for workshops.

The Resource Room has been used by parents in a similar way. The curriculum ideas are appropriate for parents to use with their children and, in fact, workshops for parents are frequently designed to build on these same ideas. Therefore, what can be started in school can be extended at home and vice-versa. Thus, bookbinding has become a popular way for parents to encourage their children at home - books can be made for scrap-books, alphabet books, diaries, and picture books. Parents can make the books for their children, or learn the technique and make books with them.

General interest workshops are given in the Resource Room, open to parents, community members and staff from Lehigh and other schools in the area. Holiday workshops (Christmas greens, gift-making, crafts - sewing, knitting, crocheting - and home and auto maintenance) have been especially popular. An on-going Child Study Group used the Resource Room as its site for group meetings and workshops. This consists of films, speakers and discussions to help parents work with their children cognitively and effectively.

It has been helpful, especially during the first year when we were trying to establish ourselves and develop a clientele that the Resource Room served as a site, and Teacher Corps staff as leaders, for some of the Parent Partnership workshops. Parent Partnership, a program sponsored by the School District of Philadelphia, provides parents with an opportunity to learn some of the newer teaching techniques and help their children at home. Through a series of workshops, individual schools and school clusters could meet the needs of their particular parent groups. By planning and staffing some of the workshops, we were able to draw parents into the Resource Room and give them a chance to see what we had to offer.

All of these functions initially were planned and prepared by Teacher Corps staff. Institutionalization of the Resource Room has and will continue to involve the participants assuming responsibility for the stocking and maintaining of materials, for staffing the Room and for continuing programs of interest to them.

As noted above, the emphasis in stocking the Room has always been to use as many free or inexpensive materials as possible. Our first task then

is to provide information on where and how these items could be obtained. The interns helped by preparing a list of all the materials in the Room, and Teacher Corps staff members who did all of the initial ordering and "rounding up" of supplies prepared a catalog of materials. Thus, any items obtained through the School District requisitions are included with the appropriate requisition title and line number. Supplies that came from city stores are listed with the catalog and price, and copies of the store catalogs are kept on file in the Resource Room. Information about "recycled" material is available, which companies and businesses (wallpaper store and printers, for example) have give-aways, their location and hours. Names and addresses of publishers are available. Newsletters from the other Philadelphia Teacher Centers are posted and these are frequently additional sources of material. The catalog is kept in the Resource Room and is readily accessible to anyone who needs it.

Of course, simply knowing where to go for materials isn't enough if there is no way to pay for them, and no one to transport and set them up. In Philadelphia each teacher is allotted $25 per year to purchase something for his/her classroom that cannot be obtained through the regular requisition. We are suggesting some of the Lehigh teachers pool their money to buy something for the Resource Room. Teacher Corps was unable to purchase a dry mount press, for example, because of the regulation against spending Federal money on a non-consumable supply, which is why all laminating is done with an iron. The staff has wanted the press for a long time and has expressed interest in pooling their $25 allotment. They would like to have the Home

and School Association help with some of the cost since the machine would be used by parents, and interested parents have suggested cake and cookie sales as a means of raising money for Resource Room supplies. In addition, Community Council members have discussed approaching businessmen and the local "Business Council" with proposals to help fund the activities of the Resource Room, and a Community Council Committee is researching this.

Some teachers have given up a prep period to help gather supplies and restock shelves. Extra materials are kept in an adjoining storage room and staff have access to both rooms. The key remains in the school office, and the faculty can use the room on their own. If they wish to borrow books or non-consumable materials, there is a sign-out sheet. Periodically, if things are missing, it is the responsibility of a staff volunteer, as it would be of a Teacher Corps staff member, to remind their co-workers that they need to return borrowed items.

A problem somewhat more complex than physical maintenance is staffing a program that has been as vigorous as this one in its variety and frequency of offerings. This has been accomplished in part by volunteer time and by parents and community members taking over the planning for many of their workshops and discussions.

Many of the Lehigh teachers have talent which has been put to good use in the Resource Room. One teacher, for example, is quite knowledgeable about tools and extremely handy. He has remained after school to keep the "shop" open, and to provide assistance and ideas to anyone who might want help. Some teachers have brought their skills to the lunchtime workshops,

batiking and Christmas ornaments for example. Similarly, community residents have been involved as workshop leaders and have run workshops in sewing, knitting, crocheting and auto mechanics. An example of a Resource Room started by Teacher Corps and taken on by parents was the sewing group. Originating as a "one time" workshop, the group was so anxious to continue that they arranged to meet regularly, approached the Home and School Association about helping with supplies and eventually moved their bi-weekly meetings to the school's Parent Room which, prior to this time, hadn't been used enough.

Similarly, the planning of the Child Study Group, which had been conceived as part of the Teacher Corps proposal and implemented during the first year entirely by Teacher Corps staff, has been taken on by parents involved. In September of the second year, the staff contacted the solid core group from the year before. This group met to plan the initial meetings and help in publicizing the series. The Child Study Group has grown to about 20 members who share their experiences and expertise with each other as well as draw on outsiders for leadership. The Child Study Group has also moved some of its meetings to the Parent Room.

The Community Council will be crucial in institutionalizing many Teacher Corps programs, including those that occur in the Resource Room. The Council used this as the site for all its meetings during the first year of Cycle 12 and now meets in the Community Room of the school. Many of the Council members have participated in Resource Room workshops and we are looking to this group to provide leadership for additional programs and ultimately help in planning and implementing new programs.

Council members represent the community in many different jobs, organizations and institutions including an officer of the Boy Scouts of America, a Philadelphia policeman, the librarian from the local branch of the Library of Philadelphia, a minister from one of the community churches and staff from the Lehigh Elementary School. During Cycle 12, the Council members have brought their resources to such things as the Lehigh Community Fair, an event initiated by the Council and now an annual affair. During the Fair, workshops and presentations are given on topics of interest to community residents such as how to protect your home against fire, where to go for help with housing problems or child abuse, and special programs offered for children by places like the Free Library. As a result of organizing a Fair such as this, Council members have made numerous contacts in the neighborhood and around the city, and we are suggesting that the Community Council combine its own resources with the groups that have offered support in the past to maintain a strong workshop program in the Resource Room - a "workshop exchange" program where Council members volunteer as workshop and discussion leaders for those institutions that had participated in the Council's activities and, in exchange, the Council members could request "in kind" contributions from their contact representatives. Workshops would be open to Lehigh parents, community members and faculty as they are now. Workshops might be scheduled monthly and needs assessment conducted periodically to insure that these programs meet the needs and interests of the participants.

Finally, the Teacher Corps staff, faculty and community members from Lehigh School will be attending a retreat in late May. We are intending, as part of the agenda, to form a committee that will take responsibility and insure that these steps are carried out.

In addition, the success of the Resource Room Program during the 12th Cycle Program has, in part, been due to the support of Mrs. Jeanette Brewer, the Superintendent of District Four, and Mr. Herbert Rogers, Principal of the Lehigh Elementary School. We thank them for their help and look forward to our continued relationship.

CHAPTER V

The Exceptional Child Component of The Pennsylvania State University Keystone Central School District Teacher Corps Project

Peter R. Matthews
Lock Haven State College

Lester S. Golub
The Pennsylvania State University

Renovo, Pennsylvania is a small relatively isolated rural community in the north central part of the state. Eighty-five percent of the approximately 7,000 areas residents are considered by the federal government to be low income. For this reason, Renovo was chosen to be part of Teacher Corps, the now 14 year old nationwide effort to strengthen educational opportunities available to children from low-income areas, and to improve the quality of teacher education programs for inexperienced interns, experienced teachers and teacher aides who work in these areas.

Thanks to a 1977 federal law, the "Education for All Handicapped Children Act," Teacher Corps programs around the nation now are enhanced by an Exceptional Child Component (E.C.C.). This part of the program is aimed at assessing the realities, needs and means of improving the educational opportunities open to all children who are "different". This encompasses a diverse set of categories, including mentally retarded, physically handicapped, emotionally disturbed, neurologically impaired, as well as children with learning disabilities, speech and hearing problems, visually impaired and even children considered gifted.

Renovo has its share of such exceptional children. Nearly nine percent

or 36 of the current 426 children in Renovo's Bucktail Area School District elementary school have been identified as having some mental or physical disability, or some combination of problems which prevent them from enjoying a normal school life. Another seven are considered gifted, bringing the total of exceptional children at the elementary level to ten percent. In the junior-senior high school, almost eight percent or another 36 of the 475 children suffer from some sort of learning problems, while one child is gifted.

To help assess the needs and to find ways of helping these children, their schools, parents, teachers, and community, a Teacher Corps Program, with an E.C.C., was set up in the Bucktail Area School District, beginning in September 1977. Funded for two years, the program will terminate on May 31, 1979. Another five-year cycle is scheduled to begin after that. Last summer, the Bucktail E.C.C. was chosen as one of 12 sample E.C.C. programs in the nation to be studied, as examples of what sort of things can be accomplished, what things appear unfeasible, and what is the best way to attempt to meet Teacher Corps goals.

While it is obviously tempting to play up one's successes and to play down the failures, such a position would do a grave inservice to the E.C.C. concept which so many people here and elsewhere, are working so hard to make successful. A fair and faithful assessment of the E.C.C program as it exists in the Bucktail Area School District will therefore be attempted. To do so, it is necessary first to become familiar with who ran the program and how it was operated.

To begin with, our E.C.C was part of a larger Teacher Corps program called the Pennsylvania State University/Keystone Central Teacher Corps Project. The project was directed by Dr. Lester S. Golub, a professor of education at Penn State, in cooperation with the Keystone Central School District, which encompasses all of Clinton County, Pennsylvania. Dr. Peter Matthews acted as coordinator for the E.C.C. An associate professor of special education at Lock Haven State College (about 25 miles from Renovo), he received his Ed. D. in education from Penn State in 1976. Other key members of the E.C.C team were Dr. Cecil Trueblood, also a Penn State professor of education, who was the project's assistant director; Steven Thompson, a Penn State graduate student in education, who was the program development specialist; Roger Kepler, a retired United States Army officer and the full-time community coordinator for the Teacher Corps project; Paul Mills, an elementary school teacher in the Keystone Central School District, was the full-time team leader for the project and four interns, who were also working toward masters degrees in education at Penn State. The interns were two former Renovo residents, Terry Kersetter and Richard Wykoff, both chosen by the school district, and two chosen by Teacher Corps nationally, Audrey Matty and Thomas Blakley. Neal Gallagher, Elementary Supervisor for Keystone Central served as Site Coordinator. Also involved to varying degrees were other education personnel from the University, the school district and the community.

Essentially, the Teacher Corps project and its E.C.C. was designed to do four things: to train additional teachers to work with the problems of low income children and with exceptional children within such areas; to act

as a resource to the school district, by helping local teachers and administrators deal effectively with "disadvantaged" children; to learn how to successfully integrate into a normal classroom those who have been in special classes; and to provide feedback to the university educators involved -- in order to help them prepare future teachers to deal with special needs children.

Before becoming coordinator of the E.C.C , Dr. Matthews, served as chairman of a group seeking to assess the special education needs of the district. He also had helped set up special programs in the community such as summer recreation programs for local handicapped children.

After attending a National Teacher Corps conference in August 1977, he spent September through November assessing the special education needs of Renovo's elementary school, having decided to concentrate the first year only on this school. The initial 10 to 12 weeks were spent talking with teachers and administrators, trying to understand the situation and problems through their eyes, and to dispel an aura of distrust that many Renovo school personnel feel about outside intervention.

In an October 1977 report to Dr. Golub, Dr. Matthews noted that he was now available on a regular basis to meet with school personnel, who could either drop by the Teacher Corps office in the elementary school during his office hours or could make an appointment. Because, unlike his counterparts in other E.C.C programs, Dr. Matthews was being paid not half-time but only approximately 15 full days a year, he reported that it would be necessary to find other resource personnel to help the Teacher Corps

project accomplish its goals. He decided to concentrate his efforts on the four interns. As it turned out, this decision proved to be the right one. Through them, the outside help of parents of exceptional children and the community as a whole was sought.

We discovered an underutilized resource in the four Teacher Corps interns. They were supposed to play some role in each of the Teacher Corps components, but how their role was to be specifically implemented was left up to the individual projects. At Renovo, the interns initially were, for the most part, acting as teacher aides for the schools. As they seemed interested in the E.C.C. , Dr. Matthews began holding inservice sessions for them, as well as for any other interested Renovo staff members. From January to the end of the school year in May, 1978, these sessions, held at the Renovo Elementary School, were attended as well by the full-time leader, Paul Mills, the community coordinator, Roger Kepler, and by a small, varying number of teachers.

Working with these people, as individuals in a group, Dr. Matthews first presented an overview of what was meant by exceptional children; in an attempt to show two things. First, such children were not that much different from normal children yet we treat them differently. Secondly, that there were many commonalities among exceptional children. The sessions were designed to dispel ignorance about exceptional children and to correct many of the misconceptions that interfere with teachers' and school administrators' abilities to deal effectively with individuals

with special needs. Before such children could be educationally helped, it was necessary to establish a common basis of understanding of their realities and needs.

The exceptional child team looked at exceptional children from different vantage points. One involved a realization that there was a fantastic amount of overlap between one type of exceptionality and another. To understand the problems and needs, for example of the mentally retarded, it might be necessary to understand the realities of the emotionally disturbed, because there was no such thing as a person who was purely mentally retarded. Other examples were advanced. A person who was physically handicapped might also have emotional difficulties which impeded learning ability.

We then concentrated on a crucial concept: how to make maximum use of the strengths of exceptional children, instead of emphasizing their weaknesses. Weaknesses can at times be overcome quite easily through the use of prosthetic devices and maximum use of visuals. The main point that it was necessary to get across, was that we have to think of others who are somehow handicapped as being much like everyone else. Most of us spend our lives trying to enhance our own images; yet, we do not do this for the handicapped. Thus, one of the things Dr. Matthews tried to stress was the necessity to focus on the strengths of the handicapped. The handicapped have a great deal of ability, which it is our duty to cultivate or bring out. We must try to concentrate on what they can do, instead of focusing on what they cannot do.

Turning to the availability of resources that might be helpful to school personnel who work with exceptional children, the exceptional child team talked about such outside aides as texts, journals, and audiovisual materials and then about the types of resources available within the school district. The thrust of our argument was that most of the necessary resources existed within the school district, if people only wanted to seek them out. What were these resources? One of the main ones was the children themselves. Others were the parents of these children, members of the community and certain teachers with special skills, knowledge or a willingness to work with these types of children. Often a problem would be solved much more easily than anyone assumed if the appropriate resources could be found and used. A good example they encountered was the case of a seventh grade boy with cerebral palsy who had a history of frequent school absences. It had been thought that he just didn't want to attend school. It turned out that he had severe blisters on his feet created largely by architectural barriers in this school. Once teachers understood his problem it was easier to help him. The lesson to be learned was that one of the most valuable and most overlooked resources was the exceptional child himself.

We closely examined our feelings toward the handicapped. To one degree or another, all of us discriminate against the handicapped. As our knowledge of the handicapped grows, we can learn why we have these prejudices. As our experiences with the handicapped increases, we will learn to discriminate against them less.

We must recognize that in order to help exceptional children, particularly to integrate them into normal classroom and normal activities, it was not necessary to change many things. Only simple adaptations must usually be made. For example, most people if asked to arrange an activity which included the handicapped would become confused because they believe that they must make enormous accommodations in the activity. The point was that, in most cases, only minor adaptations were necessary, such as finding a means of overcoming speech limitations or accommodating a wheelchair.

The final part of the exceptional child team in-service training program that first year consisted of discussion about specific problems being encountered, and how to deal with them, as well as with more general problems. The latter included such broad ranging issues as how to begin seeking special help for a child who has not previously been considered exceptional; and how to prepare exceptional children and teachers for the return to a normal classroom environment, rather than a restricted one.

The exceptional child team began to discover a degree of positive overlap between the community coordinators' and those of the exceptional child team. We found invaluable help in the person of, Roger Kepler, the community coordinator. For example, one of the interns, the team learned, was giving speech therapy to children in the community. Another became involved in the community's Special Olympics Program.

During the summer of 1978, there was limited involvement in the program. In June, Dr. Matthews visited another E.C.C. project at the Hofstra University/Westbury School District Teacher Corps project on Long Island,

New York. It turned out that despite the fact that their program was funded half-time, by using interns and other resources, the Penn State/ Keystone Teacher Corps project was accomplishing many of the same goals. They were both working at improving educational opportunities for all children. At another National Teacher Corps meeting in August, we learned that the Penn State/Keystone Teacher Corps E.C.C. project had been chosen as a demonstration project. The exact reason that the project was chosen was not given. It did, however, contain at least one exemplary element, as did the other eleven projects that were distinquished. By studying all twelve projects, it was hoped that recommendations for future E.C.C. could be established. As a result, in January, 1979, Dr. Walther Harris, coordinator of programs for special education at the University of Maine, spent two days at Renovo visiting and assessing the project.

In September of the second year, the exceptional child team formed a Corps Committee at Renovo consisting of the project's four interns, the community coordinator, the team leader and the coordinator of the E.C.C. The Corps Committee decided to concentrate on helping elementary and secondary school teachers to better deal with exceptional children. This team was to guide the E.C.C. for the second and final year.

The Corps Committee sought to devise two separate projects to help the community's exceptional children: an E.C.C. school project designed to integrate or mainstream the exceptional children who were in special classes; and a community project, aimed at orienting parents to the needs of exceptional children. As a result, they began in September, 1978, first of 3 half-day

in-service sessions. These were attended by all teachers and guidance counselors and some school administrators. Only a few of these school personnel had attended some of the in-service sessions the year before.

The inservices, drawn from last year's sessions, were designed to deal with teacher and administrator perceptions of exceptional child problems and goals, and to devise effective means of getting a maximum number of exceptional children into the least restrictive classroom environments possible. Once an overview of exceptionalities was covered, we tried to listen to teacher perceptions and to suggest strategies for exceptional children.

Discussing teacher perceptions of how effectively the problems and needs of exceptional children were being handled, we found that the teachers believed they were doing as much as they could, but that they were being hindered by unsympathetic, uninformed administrators. Specifically they claimed that when referrals were made, they were not followed up, and that exceptional children were being "dumped" into regular classrooms, without sufficient preparation or support. Overall, the teachers maintained that they had enough to do with regular children without being saddled with the extra burdens of the exceptional children. Essentially, all we did was listen to their ideas, without commenting on them. We did not think the project was far enough along to truly assess the merits of many of these complaints.

As a result of our inservices on the exceptional child, we developed a module on exceptional persons that hopefully will be implemented at the university level. Included in this module is an overview of exceptional persons

regardless of how they are labelled. These are: preconception, prenatal, perinatal, postnatal, genetics vs. environment; impairment, disability, handicap; mild, moderate, severe, profound; least restrictive environment; normalization; mainstreaming; PL 94-142 (Education for all Handicapped Children Act); strengths vs. weaknesses; service delivery; and the Council for Exceptional Children.

We ran into another problem with the interns. The first year it had been mandatory for all four interns to be involved in the E.C.C to essentially the same degree. The second year, they had been given more choice, since it was recognized that they could not invest equal energy in all directions. As a result, only one of the four interns elected to use a significant amount of her time on the E.C.C. Because of the development, we realized that not only four interns would come out of the program with the same degree of competency in dealing with exceptional children, although all of them attained minimal competency.

At the project's beginning we had expected that by the end of the project we would have been able to identify the children who could successfully be mainstreamed, that we would have been able to prepare the teachers and other school personnel for this, and that we could have developed effective curriculum innovations. Specifically we had planned to work with four youngsters from different special education classes, and to demonstrate to the school district that mainstreaming could be done successfully.

We now acknowledge that the school district was not ready for this. They were still at the stage where they were mainstreaming children into classes without providing sufficient preparation support. Two years are not enough to accomplish this enormous task.

We now realize that before we could show the schools how to successfully mainstream children, school personnel would have to learn more about the process as it now exists. We would have to understand more about the current problems to determine how to resolve these.

We learned that we expected too much from everyone -- teachers, school administrators, parents, the community and the Teacher Corps Exceptional Child team. In order to correct these deficiencies the Corps Committee, with the endorsement of the school district, scruitinized the referral/assessment/placement process for exceptional children. The Corps Committee looked at how a teacher goes about seeking help if it's determined that a child has a special problem. They also looked at the problems the teachers, school administrators, guidance counselors and other support personnel encountered where exceptional children were concerned.

We developed specific recommendations as to how the entire process should work from the time the child is referred until he or she is appropriately placed in the least restrictive environment. This would hopefully be a regular classroom, at least for part of the school day, supported by some sort of special resource help.

Specifically, we recommended that all school personnel must learn how to better work and deal with exceptional learners. School personnel, parents and students must understand and follow the established referral/assessment/ placement process. For this process to work more effectively and efficiently, there is a need to early intervention, more home-school conferences, time restraints, accurate and complete records, and informing all parties involved of the decisions made. A proven mainstreaming model needs to be followed. Criteria for promotion or retention of exceptional children need to be understood. The district should employ a person to consolidate and directly supervise all exceptional child programs.

To accomplish this, we met about twice a month with Paul Mills, the team leader, and with two or three of the interns. The Corps Committee's major concern was with the project's end. It was our hope that the school district would be left with a concrete foundation, that would enable them to carry on the work independently, as the interns were trained to perform much of Dr. Matthew's role. We hoped that some of the teachers would have learned enough to carry on by themselves. Unfortunately, most of the teachers were not as highly trained as the interns were.

As we look back on the project it is easy to see how things could have been done better. Some of the major changes we would now make are:

1. We would have trained the interns earlier and more quickly, during the first half of the project, in order to have begun training of the teachers earlier. Had the teachers had more direct and intensive training, we believe they would now be in a better position to deal effectively with exceptional children.

2. We would have spent more time with the exceptional children themselves and with their parents, determining their problems and needs and looking for ways of helping them.

3. We would have better utilized the school and community resources. Surely there were untapped talents and knowledge, which could have been used to help specific children and situations.

4. Finally, we should have had a more precise idea of goals from the beginning. This would have enabled the exceptional child team to waste less time seeking to learn what it was they had to overcome.